



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
RESEARCH TRIANGLE PARK, NC 27711

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OFFICE OF  
AIR QUALITY PLANNING  
AND STANDARDS

**MEMORANDUM**

**SUBJECT:** Implementing Reasonably Available Control Technology Requirements for Sources Covered by the 2016 Control Techniques Guidelines for the Oil and Natural Gas Industry

**FROM:** Anna Marie Wood, Director *Anna Marie Wood*  
Air Quality Policy Division, OAQPS (C504-01)

**TO:** Regional Air Division Directors, 1 - 10

The purpose of this memorandum is to provide information and guidance on State Implementation Plan (SIP) revisions resulting from the newly-issued Control Techniques Guidelines (CTG) document for the Oil and Natural Gas Industry. The CTG provides recommendations to inform state determinations as to what constitutes reasonably available control technology (RACT) for emission sources covered by this CTG. The 2016 Oil and Gas CTG is available on our website at:

<https://www.epa.gov/ozone-pollution/state-implementation-plan-sip-checklist-guide>.

States that contain certain ozone nonattainment areas and states in the Ozone Transport Region (OTR) are required to submit a revision to the RACT provisions in their ozone SIP in response to any newly-issued CTG document. In accordance with the timing set forth in the Oil and Gas CTG, the revision to SIP RACT provisions for sources covered by the CTG are due 2 years after the CTG Notice of Availability is published in the *Federal Register*. Sources covered by this CTG include those located in 2008 ozone National Ambient Air Quality Standards (NAAQS) nonattainment areas classified as Moderate (or higher) and the states in the OTR, although states may also apply the recommendations in this CTG to sources in other areas. The emissions controls determined by the state to be RACT for sources covered by the Oil and Gas CTG must be implemented as soon as practicable, but in no case later than January 1, 2021.

Tribes may choose to adopt RACT provisions in a Tribal Implementation Plan (TIP) to address the Oil and Gas CTG in Indian country.<sup>1</sup> Consistent with the Clean Air Act (CAA) and the Tribal Authority Rule (TAR), where tribes do not develop a TIP for nonattainment areas of Indian country classified as

<sup>1</sup> On January 17, 2014, the United States Court of Appeals for the District of Columbia Circuit issued a decision vacating the Environmental Protection Agency's 2011 rule titled, "Review of New Sources and Modifications in Indian Country" (76 FR 38748) with respect to non-reservation areas of Indian country unless a tribe or the EPA demonstrates that a tribe has jurisdiction in a particular area (*See Oklahoma Department of Environmental Quality v. EPA*, 740 F.3d 185 (D.C. Cir. 2014)). Under the court's reasoning, with respect to CAA SIPs, a state has primary regulatory jurisdiction in non-reservation areas of Indian country (i.e., Indian allotments located outside of reservations and dependent Indian communities) within its geographic boundaries unless the EPA or a tribe has demonstrated that a tribe has jurisdiction over a particular area of non-reservation Indian country within the state.

Moderate (or higher) for the 2008 ozone NAAQS, the EPA will adopt a Federal Implementation Plan if it determines that doing so is necessary or appropriate to protect air quality. *See* CAA §301(d), 40 CFR 49.4, and 40 CFR 49.11.

The Oil and Gas CTG includes model rule language for air agencies to consider in developing their RACT provisions. The model rule language was developed to assist air agencies in situations where they may not have monitoring, inspection and performance testing provisions necessary for RACT. In some cases, the model rule language may need to be revised to make it adequate for SIP approval purposes. The model rule language may assist with determining compliance requirements where air agencies determine the recommendations in the Oil and Gas CTG constitute RACT.

The EPA has provided RACT implementation policies in previous guidance documents available at <https://www.epa.gov/ozone-pollution/state-implementation-plan-sip-checklist-guide>. The RACT policies describe the general process for case-by-case RACT determinations and how air agencies can judge the feasibility of imposing the recommended controls within their particular jurisdictions and adjust the control recommendations as appropriate and justified. The recommended controls in the Oil and Gas CTG are the “presumptive norm” based on general industry parameters and published assumptions. In its review and approval process for case-by-case RACT determinations, the EPA will consider the information in the CTG, as well as information submitted by the air agencies and the public.

The EPA has defined RACT as the lowest emission limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.<sup>2</sup> The General Preamble Supplement (September 17, 1979, 44 FR 53761), goes on to indicate that RACT for a particular source is determined on a case-by-case basis, considering the technological and economic circumstances of the individual source. In evaluating economic feasibility for RACT determinations, the EPA gives significant weight to economic efficiency and relative cost-effectiveness.<sup>3</sup> The EPA has not established universal decision criteria for technological and economic feasibility that would apply in every case, and did not establish decision rules that would have restricted the cost consideration in determining whether an emissions control is considered “cost effective.” Therefore, all RACT determinations are considered case-by-case determinations.

The Oil and Gas CTG contains recommended controls that states may readily adopt, subject to EPA approval, for groups of covered sources. However, a state may also consider the uniqueness of a specific source’s operations in evaluating whether the recommended controls are RACT for that source. The air agency should provide EPA with the information supporting the source-specific determination of RACT for each source. This demonstration could take into account cost effectiveness. Where the EPA determines that the air agency has shown that an alternative to the controls recommended in the CTG satisfies the requirements for RACT, the EPA will propose to approve the RACT demonstration.

The attached RACT Questions and Answers (Q&A) document addresses issues raised during the comment period on the draft Oil and Gas CTG. The Q&A document provides additional clarifications that we believe may be helpful to the air agencies preparing the ozone SIP revisions triggered by the issuance of the 2016 Oil and Gas CTG. Please distribute this document to your states, local control

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<sup>2</sup> The EPA articulated this definition of RACT in a memorandum from Roger Strelow, Assistant Administrator for Air and Waste Management, to Regional Administrators Regions I-X, titled “Guidance for Determining Acceptability of SIP Regulations in Non-attainment Areas,” (December 9, 1976).

<sup>3</sup> The role of economic feasibility is discussed in the June 19, 1985, EPA memorandum titled, “Criteria for Determining RACT in Region IV.”

agencies and tribal governments. Regional office staff may contact Butch Stackhouse at (919) 541-5208 or *stackhouse.butch@epa.gov*, with questions about RACT policy, and Bruce Moore at (919) 541-5460 or *moore.bruce@epa.gov*, with questions about the CTG recommendations.

Attachment

## Attachment

### Questions and Answers Regarding the Control Techniques Guidelines (CTG) for the Oil and Natural Gas Industry (Oil and Gas CTG)

#### Reasonably Available Control Technology (RACT) Requirements for 2008 Ozone National Ambient Air Quality Standards (NAAQS) Nonattainment Areas and Ozone Transport Region (OTR) States

Q1: When do the states with Moderate (or higher) ozone nonattainment areas for the 2008 ozone NAAQS and states in the OTR need to submit State Implementation Plan (SIP) revisions to address the Oil and Gas Control Techniques Guidelines (CTG)?

A1: Clean Air Act (CAA) section 182(b)(2) provides that the EPA Administrator will establish a deadline for SIP revisions addressing RACT for sources covered by any new CTG. The 2016 Oil and Gas CTG is considered to have been issued upon its effective date which is the same date that it is published in the *Federal Register*. The SIP revisions are due to the EPA 2 years after the CTG is issued. This deadline applies for areas classified as Moderate (or higher) for the 2008 ozone NAAQS, and to states in the OTR as of the date the CTG is issued.

Q2: What is the maximum amount of time that a SIP revision for the 2008 ozone NAAQS RACT requirements arising from the 2016 Oil and Gas CTG may allow for subject sources to comply with the new RACT requirements?

A2: The SIP revision should provide for RACT to be implemented as expeditiously as practicable. For the previous 1-hour ozone NAAQS, section 182(b)(2) of the CAA provided a time limit for implementation of approximately 30 months. For the 2008 ozone NAAQS, the EPA adopted similar timing for RACT submissions triggered by area designations, setting a deadline of January 1 of the 5th year after the effective date of designation for that NAAQS (see 40 CFR 51.1112(a)(3)). For purposes of the 2016 Oil and Gas CTG, we are applying similar deadlines as provided in 40 CFR 51.1112(a)(3), which means that all RACT requirements must be implemented by January 1 of the 5<sup>th</sup> year after the CTG is issued, *i.e.*, by January 1, 2021. We also note that the ozone implementation rules at 40 CFR 51.1108(d) provide that all measures a state intends to rely on for attainment must be implemented no later than the beginning of the last full ozone season before the attainment date. So, if a state intends to rely on reductions from new Oil and Gas measures for purposes of attaining the 2008 ozone NAAQS, the RACT rules must require compliance no later than the beginning of the 2017 ozone season for Moderate areas, and the beginning of the 2020 ozone season for Serious areas.

Q3: Do tribes need to meet the same submittal and implementation deadlines if they choose to develop a Tribal Implementation Plan (TIP)?

A3: The Tribal Authority Rule (TAR) at 40 CFR 49.4 states that tribes will not be treated as states with respect to certain plan submittal and implementation deadlines for the NAAQS and other CAA deadlines including requirements under CAA §182. While the TAR provides that the EPA “[s]hall promulgate without an unreasonable delay such federal implementation plan provisions as are necessary or appropriate to protect air quality” where a TIP is not adopted by a tribe, the EPA has flexibility with regard to the timing for doing so. See CAA §301(d) and 40 CFR 49.11.

Q4: Does issuance of the 2016 Oil and Gas CTG create a separate RACT determination obligation for areas that were nonattainment for the 1997 ozone NAAQS at the time it was revoked?

A4: No. We revoked the 1997 ozone NAAQS effective April 6, 2015, but retained certain requirements for areas under our regulatory anti-backsliding provisions. *See* 40 CFR 51.1105. Under the anti-backsliding provisions, only the CTG-related RACT requirements under the 1997 ozone NAAQS that applied to an area at the time of revocation of the 1997 ozone NAAQS (April 6, 2015) were retained. Since the new Oil and Gas CTG was issued after April 6, 2015, it is not an applicable anti-backsliding requirement for the previous 1997 ozone nonattainment areas under our anti-backsliding regulations.

Q5: Can the recommendations in the 2016 Oil and Gas CTG be applied to relevant sources not otherwise subject to the CAA's RACT requirement?

A5: Yes. States may use the CTG, including the model rule language, as a reference for establishing emissions controls for existing oil and gas sources not subject to the CAA's RACT requirements. This would include sources located in attainment areas and in Marginal nonattainment areas. Because controls for such sources are optional, the CAA and EPA's rules do not specify an implementation deadline for such controls.

#### RACT Determinations

Q6: What flexibility do states with established oil and gas sector regulations have in establishing RACT for their sources covered by the 2016 Oil and Gas CTG?

A6: The Oil and Gas CTG provides presumptions of what technology is reasonably available. These presumptions are provided for the purpose of informing RACT determinations made by air agencies. These presumptions, however, are not binding. The air agencies may justify the implementation of other technically-sound approaches that are consistent with the CAA, the EPA's implementing regulations, and policies on interpreting RACT. Regardless of whether an air agency chooses to adopt rules implementing the recommendations contained in the CTG or to issue rules that adopt different approaches for RACT for volatile organic compounds emitted from oil and natural gas industry sources located in the OTR states or in the relevant nonattainment areas in its jurisdiction, air agencies must submit their RACT rules to the EPA for review and approval using the SIP process. The EPA will evaluate the submissions and determine, through notice and comment rulemaking, whether the submitted rules meet the RACT requirements of the CAA and the EPA's regulations.

Q7: Can an air agency determine that the RACT requirement for oil and natural gas sources is met with the federal oil and natural gas New Source Performance Standards (NSPS)?

A7: The EPA has not made a determination that the NSPS (40 CFR part 60, subpart OOOOa), which differs from the 2016 Oil and Gas CTG in several respects, is presumptively RACT. Moreover, the federal oil and gas NSPS does not apply to existing sources. If the air agency believes that the NSPS establishes RACT-level controls for one or more sources, the air agency may submit those rules as a SIP revision. Any such SIP would need to clearly apply the control requirement contained in the NSPS to relevant existing sources in the specific nonattainment area or OTR state. The EPA will evaluate the submitted rules and determine, through notice and comment rulemaking in the SIP revision process, whether the submitted rules meet the RACT requirements of the CAA and the EPA's regulations.

Q8: Can an air agency submit a negative declaration that a specific nonattainment area or entire OTR state has no sources covered by the 2016 Oil and Gas CTG?

A8: Yes. The air agency must provide and submit such a declaration as a formal SIP revision that complies with the requirements of the CAA and 40 CFR part 51, Appendix V (e.g., the declaration is subject to public process) and provide documentation supporting the negative declaration.

Q9: Can an air agency demonstrate that implementing the recommended RACT controls in the CTG is not technologically and economically feasible due to particular circumstances of a specific source (e.g., considering the cost-effectiveness of the control when the VOC content of the gas is very low)?

A9: Yes. Cost-effectiveness can be a relevant consideration when evaluating the technological and economic feasibility of a control. Such a demonstration would need to include documentation of the specific factors that lead to the agency's conclusion that an alternative control is justified as RACT in lieu of the CTG-recommended RACT for the relevant source or sources.

Q10: Can an air agency use the VOC content of an oil or gas stream as an applicability threshold for determining whether a RACT determination is required for a source covered by the 2016 Oil and Gas CTG?

A10: No. The emissions sources covered by the 2016 Oil and Gas CTG's recommendations do not depend on and are not defined by VOC content thresholds. However, an air agency could determine that, based on the VOC content of an oil or gas stream at a specific source, the recommended RACT is not technologically or economically feasible. This should be a source-specific conclusion, and not a conclusion that is applied to all sources with relatively low VOC concentration oil or gas streams without regard to volume or throughput. The EPA's policies encourage air agencies to consider the VOC emission potential of sources in their area and how they may differ from those considered in the analyses that support the recommendations in the 2016 Oil and Gas CTG when they make their RACT determinations.

Q11: Can an air agency determine that VOC reductions will not improve ozone air quality in the nonattainment area (*i.e.*, the area is nitrogen oxide (NO<sub>x</sub>) limited) and, therefore, determine no further VOC controls are required to meet RACT requirements triggered by the 2016 Oil and Gas CTG?

A11: No. The CAA does not exempt areas that are NO<sub>x</sub>-limited from meeting RACT requirements for sources of VOC. Section 182(b)(2)(A) of the CAA provides that for Moderate (or higher) ozone nonattainment areas, air agencies must revise their SIPs to include RACT for each category of VOC sources covered by a CTG document issued between November 15, 1990, and the date of attainment. CAA Section 184(b) requires that state air agencies in the OTR must revise their SIPs to implement RACT with respect to all sources of VOC in the state covered by a CTG. Therefore, all states in the OTR and all Moderate (or higher) ozone nonattainment areas are required to make RACT determinations for sources covered by the 2016 Oil and Gas CTG.

Q12: Can an air agency establish a framework for implementing voluntary measures for sources covered by the CTG to fulfill the statutory RACT requirement?

A12: No. RACT measures must be permanent and enforceable emission controls.

Q13: Can an air agency exclude from their RACT determinations those sources implementing best management practices?

A13: No. RACT determinations must be made for all sources covered by the 2016 Oil and Gas CTG.

RACT Requirements for Nonattainment Areas and OTR States Associated With the 2015 Ozone NAAQS

Q14: Will an air agency's RACT determination for oil and natural gas sources in their state, required for purposes of the 2008 ozone NAAQS, also satisfy the future RACT requirement for those same sources for purposes of the 2015 ozone NAAQS?

A14: For air agencies submitting SIP revisions to address RACT for sources covered by the 2016 Oil and Gas CTG during the first few years after nonattainment designations for the 2015 ozone NAAQS, it is likely any RACT determinations just recently completed for the 2008 ozone NAAQS would not change. However, air agencies required to address RACT under the 2015 ozone NAAQS will need to review existing RACT determinations to determine whether existing rules still meet RACT for all covered sources at the appropriate time for purposes of the 2015 ozone NAAQS. This review should take into account any sources affected by any differences that might exist between the nonattainment area boundaries for the 2015 and 2008 ozone NAAQS. For example, a larger nonattainment area for the 2015 NAAQS might result in RACT determinations for additional sources. If the air agency determines that the RACT requirement for the 2015 ozone NAAQS is the same as the determination made for the 2008 ozone NAAQS, the air agency could submit a certification letter explaining the basis for this determination. A state's SIP submission in the form of a certification letter attesting that the state's SIP already contains adequate provisions to satisfy the RACT requirement for sources covered by the 2016 Oil and Gas CTG must come to the EPA as a SIP submission in accordance with 40 CFR part 51, Appendix V, which includes a state notice-and-comment process.

Q15: Where an air agency submits a negative declaration (that the area in question has no sources to which the CTG is applicable) under the 2008 ozone NAAQS, are they required to submit a new negative declaration for the RACT requirement for the 2015 ozone NAAQS?

A15: Yes. Air agencies may not rely on negative declarations submitted for purposes of any prior ozone standard to fulfill a new RACT determination requirement triggered by the establishment of a new ozone standard. It is possible that since the period of the last negative declaration, new CTG-covered sources have been located in the area where RACT must be addressed. Air agencies, therefore, must provide and submit a new SIP revision (which is subject to public notice and comment) containing either new RACT determinations or a new negative declaration.

Q16: When must air agencies governing nonattainment areas or OTR states submit a SIP revision for RACT to the EPA? What is the required implementation date for any emission limits/controls determined to be RACT in the state's SIP revisions for the 2015 ozone NAAQS?

A16: These deadlines are derived from the RACT requirements in CAA section 182(b)(2). The EPA has not yet finalized an Implementation Rule for the 2015 ozone NAAQS, but we anticipate that the RACT deadlines for the 2015 ozone NAAQS will follow the same schedule as those associated with the 1997 and 2008 ozone NAAQS. For both the 1997 and 2008 ozone NAAQS, the EPA's implementation rules provided that RACT SIP submissions were due 24 months after the effective date of area designation.

Those rules further provided that air agencies must require affected sources to implement RACT rules as expeditiously as practicable, but no later than January 1 of the 5<sup>th</sup> year after the effective date of designation. Those rules also indicate that any measures relied on for demonstrating attainment must be implemented no later than the beginning of the final full ozone season preceding the attainment date. See 40 CFR 51.1108. In some circumstances, that date would precede the latest date for implementing RACT under the RACT regulatory provisions.<sup>4</sup>

Q17: If an air agency applies CTG-recommended controls to oil and gas sources located in attainment areas outside the OTR, can the reductions be credited in the state's ozone SIP?

A17: In certain cases VOC emissions controls on oil and gas sources located outside ozone nonattainment areas may help improve air quality in the downwind nonattainment areas. Reductions from sources outside a nonattainment area are not creditable toward fulfillment of CAA-required reasonable further progress goals in those nonattainment areas. However, if states determine that such reductions are beneficial, CAA section 172(c)(6) indicates that these control measures should be considered for inclusion in the state's attainment plan.

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<sup>4</sup> For reference, the SIP revision schedule for RACT for the 2008 ozone NAAQS can be found at 40 CFR 51.1112(a)(2) and (3). Additional information regarding RACT requirements for the 2008 ozone NAAQS can be found in the March 6, 2015, *Federal Register* notice (80 FR 12263) on page 12278 in section 1, and in the EPA's responses to questions 14, 36 and 37 of the May 18, 2006, Q&A document (available at <https://www3.epa.gov/ttn/caaa/t1/memoranda/ractqanda.pdf>).